

UNITED STATES PATENT OFFICE.

GEORGE G. MUNGER, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN LUBRICATING COMPOUNDS.

Specification forming part of Letters Patent No. **198,664**, dated December 25, 1877; application filed September 15, 1877.

To all whom it may concern:

Be it known that I, GEORGE G. MUNGER, of the city of Rochester, county of Monroe, and State of New York, have invented a certain new and useful Improvement in Lubricating Compounds; and I do hereby declare that the following is a full, clear, and exact description of the same.

My improvement relates to liquid compounds in which plumbago is used for the purpose of increasing the lubricating qualities; and consists of a compound of petroleum-oil, plumbago, Japan wax, tallow, and soda.

The proportions of the ingredients may be varied as necessity may require; but for ordinary purposes I use the following: Petroleum-oil, one gallon; plumbago, six ounces; Japan wax, three ounces; tallow, four ounces; soda, one ounce. For the manufacture of this compound the above-named ingredients are mixed together and heated to a simmering heat, or, say, 180° Fahrenheit, and actively stirred all the time. For a few moments during the operation the mixture should touch boiling-point. The heat should be kept applied one hour, or thereabout. About twenty-four hours after cooling the mass should be again thoroughly agitated, and then allowed to stand a few hours before use or shipment.

The petroleum-oil forms the body of the

compound. The Japan wax serves the purpose of holding the plumbago in permanent suspension in the oil, which it does by floating it throughout the same. It is also a good lubricant in itself, and possesses unctuous properties to a considerable degree. The tallow furnishes the necessary unctuous matter, and produces a commingling of animal and mineral oils in the mixture, which, on many accounts, is desirable. The soda neutralizes the acid in the tallow, and also has a binding action, producing a more perfect union of the elements in the compound. The tallow, soda, and the aqueous matter in the oil subject the mass to a saponifying process, which is beneficial. I find, from experiment, that Japan wax is a superior agent for holding the plumbago in suspension, being preferable to bees-wax and other substances well known for the purpose. A small quantity only is necessary, and it is very cheap.

What I claim as my invention, and desire to secure by Letters Patent, is—

The compound consisting of petroleum-oil, plumbago, Japan wax, tallow, and soda, as herein described, and for the purpose specified.

GEO. G. MUNGER.

In presence of—
R. F. OSGOOD,
JACOB ZUHN.